



istanbul matematiksel bilimler merkezi
istanbul center for mathematical sciences

NONCOMMUTATIVE SURFACES

Jens Hoppe

KTH, Stockholm

Abstract

Many aspects of the differential geometry of embedded manifolds, including curvature, can be formulated in terms of multi-linear algebraic structures on the space of smooth functions. For Matrix analogues of embedded surfaces, I will define curvature, and a noncommutative Gauss-Bonnet theorem. After giving a general introduction to the Poisson-algebraic reformulation for surfaces, as well as explaining a method to associate sequences of finite dimensional matrices to them, I will focus on examples, including noncommutative analogues of minimal surfaces (that play a central role in one of the promising attempts to unify the known physical interactions).

Date : Tuesday, November 10, 2015

Time: 15:30-17:00

Place : IMBM Seminar Room, Boğaziçi University South Campus